

**U.S. Army Corps of Engineers
Regional General Permit 86
West Bay to East Walton Counties, Florida**

**Biological Opinion
May 19, 2004**

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INTRODUCTION

This document transmits the Fish and Wildlife Service's (Service) biological opinion (BO) for the U.S. Army Corps of Engineers (Corps) issuance of Regional General Permit (RGP-86). RGP-86 authorizes certain dredge and fill activities in non-navigable waters of the U.S. which are located in three large watersheds, including the Lake Powell watershed and various drainage basins of the Choctawhatchee Bay and West Bay watersheds within southeastern Walton County and southwestern Bay County, Florida. This opinion is in accordance with Section 7 of the Endangered Species Act of 1973, as amended (Act), (16 U.S.C. 1531 *et seq.*).

This biological opinion is based on information provided in the December 22, 2003, Biological Assessment (BA) and draft permit advertised on August 29, 2003. A complete administrative record of this consultation is on file in the Service's Panama City, Florida Field Office.

CONSULTATION HISTORY

May 1999	An interagency group met to review cumulative impacts to wetlands in the project area. The focus was primarily on specific projects being proposed by the St. Joe Company in the vicinity of Panama City Beach.
May 1999 through October 2001	The interagency group continued to meet with varying representatives of agencies, applicants and consultants involved in development projects in the area. The group addressed ways to improve coordination and review of specific projects and approaches to evaluating cumulative impacts. On April 20, 2001, the group met at Disney Wilderness Preserve to learn more about the mitigation approach used by the Orlando Airport Authority and others.
October 2001	The Service presented to the group a potential landscape approach of addressing build-out of the area and assessing impact and conservation needs. The study area at that time was the southwestern quadrant of West Bay.
Winter 2002	The interagency group further explored regulatory mechanisms for assessing cumulative impacts and implementing a comprehensive conservation plan for the watersheds of southern West Bay, Lake Powell, and southeastern Choctawhatchee Bay.

Winter 2002 to present	The interagency teams continue to meet regularly to develop the “West Bay to East Walton Regional General Permit” (RGP-86) and the State equivalent regulatory mechanism, an “Ecosystem Management Agreement.”
July 16, 2003	The interagency team discussed the consultation requirements. The consultant requested that the Service identify the species that should be addressed in the project analysis. The Service noted that this is the purpose of the BA, which should be prepared in conjunction with the Federal action agency, the Corps of Engineers. Species lists for the counties would be provided by the Service.
August 1, 2003	The Service provided a species list only for Walton County since a current list for Bay County was provided in 2001 before the project area was expanded.
August 22, 2003	All parties teleconferenced to discuss the BA.
August 26, 2003	The consultant provided a draft species list and proposed determinations of effects.
August 29, 2003	The Corps issues a public notice for RGP-86.
September 24, 2003	The Service participated in a Corps public workshop to discuss RGP-86.
September 29 – October 3, 2003	The St. Joe Company enlisted consulting herpetologist, John Palis, to evaluate potential flatwoods salamander habitat within the project area.
October 23, 2003	The Service provided written concurrence of the species lists used in the BA.
October 30, 2003	A draft BA was transmitted by the consultant to the Corps and to the Service.
November 13-14, 2003	The interagency team provided verbal comments on the BA.

December 4 and 9, 2003	The Service assisted the consultant and John Palis with field evaluations of potential flatwoods salamander habitat.
December 11, 2003	Another draft BA was transmitted to the Service.
December 16-17, 2003	The interagency team met to discuss the BA and other items related to RGP-86.
December 22, 2003	The consultant transmitted the final BA to the Service.
December 23, 2003	In a letter to the Service, the Corps concurs with the findings of the BA and requests initiation of formal consultation.
December 24, 2003	The Service transmitted an electronic copy of the draft BO to the Corps with copies as requested to WilsonMiller and the St. Joe Company.
January 12, 2004	The Service participated in a public workshop regarding DEP's Ecosystem Management Agreement.
January 27, 2004	WilsonMiller provided comments on the draft BO to the Service and to the Corps.
January 30, 2004	A revised draft of the BO was transmitted to the Corps.
February 5, 2004	At the request of the agencies, WilsonMiller provided a "salamander checklist" as an addition to the BA.
February 25, 2004	The Service and Corps met to discuss suggested revisions to the BO.
March 18, 2004	The Service faxed a memorandum to the Corps and WilsonMiller regarding telephus spurge conservation.
April 21, 2004	WilsonMiller conducted a survey for telephus spurge north of Highway 98.

April 30, 2004

WilsonMiller provided details of the telephus spurge survey and a memorandum describing revised conservation measures.

May 6, 2004

The Corps concurred with the Service that the additional information was sufficient to proceed with the final biological opinion.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Regional General Permit #86 (RGP-86) was cooperatively developed by several State and Federal agencies to address the cumulative effects of existing and anticipated development pressures within a fast growing region of the Florida panhandle. A public notice for the permit was published on August 29, 2003. The area addressed by the permit is approximately 47,480 acres in southwest Bay County and southeast Walton County (Figure 1, page 6). Approximately 90 percent of the property is presently in silviculture (forestry) management and is owned by the St. Joe Company. However, as recent trends near the coastline indicate, forestry is giving way to more lucrative residential and commercial development. In addition, just outside the RGP area is the location for a proposed new regional airport, which is undergoing separate review by the Federal Aviation Administration.

Wetland regulatory agencies have been inundated with permit applications in the area, particularly along U.S. Highway 98 and in the vicinity of Lake Powell. These agencies, along with other Federal and State natural resource agencies, have recognized the need to develop an ecosystem approach to reviewing these permits and assessing the adequacy of mitigation sequencing. RGP-86 provides a mechanism for addressing the cumulative effects of many potential dredge and fill permits by influencing the extent and intensity of development across the landscape. It is accompanied by a State regulatory mechanism, which is known as an Ecosystem Management Agreement (EMA) and is administered by the Florida Department of Environmental Protection (FDEP).

RGP-86 does not directly control development in the area, but it provides an incentive for landowners to participate in the watershed plan that was developed by the agencies. Landowners may continue to submit applications for routine individual permits; however, it is recognized that agency review will require more time and may not be favorable unless ecosystem benefits similar to the principles of RGP-86 can be achieved. The basic principles of RGP-86 are that a maximum 20 percent of a watershed's low quality wetlands can be impacted; these wetland impacts must be fully compensated within the larger watershed; less than one percent of high quality wetlands will be impacted and fully compensated; the Lake Powell watershed wetland functions will not be diminished by any amount; large areas of wetlands and uplands

(“conservation units”) will be set aside from future development; and compensatory mitigation will be consolidated in two large mitigation banks.

Conservation measures

The interagency working group developed the following conservation measures that will be incorporated within RGP-86. These measures will further the recovery of the species under review.

1. A maximum of 20 percent of low quality wetlands on a project site or within a watershed sub-basin can be impacted. Impacts will be compensated in a mitigation bank, on site, or within identified Conservation Units. The interagency team defined low quality wetlands as those planted for pine silviculture and ditches.
2. Impacts to high quality wetlands (wetlands not in silviculture) will be limited to necessary, minimized road crossings. Total fill of high quality wetlands in the entire 47,480-acre project area cannot exceed 125 acres.
3. Avoidance of impacts to wetlands could assist in the recovery of the flatwoods salamander, indigo snake, bald eagle, and Godfrey’s butterwort, if these areas are managed appropriately.
4. Restoration and management of two mitigation banks will secure for conservation two large, strategically placed parcels totaling approximately 7,700 acres. These banks are currently used for industrial forestry, and without RGP-86 could be partially converted to development sites in the future. The mitigation banks could assist in the recovery of the flatwoods salamander, red-cockaded woodpecker, indigo snake, bald eagle, Godfrey’s butterwort, telephus spurge, Gulf sturgeon, and manatee.
5. Approximately 10,665 acres of uplands and wetlands (27 percent of the project area) will be designated as Conservation Units (CU’s). These areas will be removed from development potential and industrial forestry practices. They will eventually be restored in amounts relative to parcel sizes of future development projects. The interagency working group developed specific prescriptions for wildlife management that focus on listed species. The CU’s include significant amounts of uplands, which do not normally receive direct attention in wetland regulatory programs. The CU’s could eventually assist in the recovery of the flatwoods salamander, red-cockaded woodpecker, indigo snake, bald eagle, Godfrey’s butterwort, telephus spurge, Gulf sturgeon, and manatee.

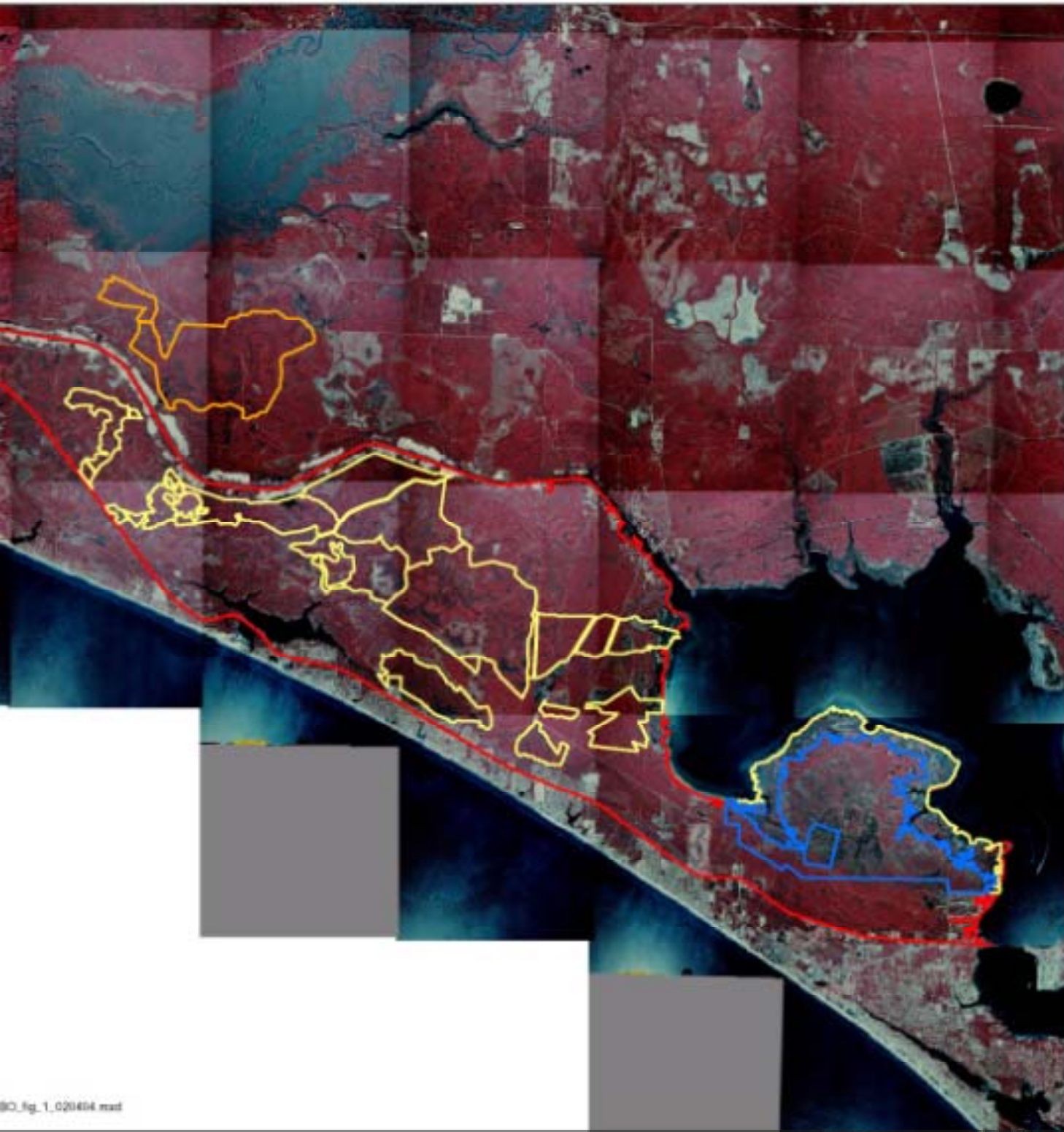






Figure 1

**RGP Boundary
Biological Opinion**

**West Bay to
East Walton RGP**

Legend

-  Conservation Units
-  Project Area (including Tidal Soils)
-  Devil's Swamp Mitigation Bank
-  Breakfast Point Mitigation Bank

Disclaimer:

This exhibit was prepared utilizing GIS data provided by various sources that may include but not limited to federal, state, district and local agencies. Data provided by other sources are not warranted by WilsonMiller for accuracy or for any particular use that may require accurate information. This map is for informational purposes only and should not be substituted for a wetland jurisdictional determination, true title search, property appraisal, survey, or for zoning verification.

Map Date:
02/04/04



0 0.5 1 2 3 4 Miles

WilsonMiller
New Directions in Planning, Design & Engineering

6. In general, low quality wetlands provide somewhat of a buffer to high quality wetlands in the project area. For specific projects, buffers to high quality wetlands will be comprised of uplands and/or low quality wetlands, and will be on average not less than 50 feet with a minimum of 30 feet in some locations. The buffers will remain in a natural condition with no application of fertilizers and herbicides. Providing buffers where they are not currently required could assist in the recovery of the flatwoods salamander, red-cockaded woodpecker, indigo snake, bald eagle, Godfrey's butterwort, telephus spurge, Gulf sturgeon, and manatee.
7. A sub-basin watershed approach to wetlands avoidance is a priority over the larger watershed approach. Protection of sub-basins should provide better protection of water quality and quantity functions. This could assist in the recovery of species such as Gulf sturgeon and manatees, which may occur in receiving water bodies.
8. Environmental Resource Permitting (ERP) stormwater attenuation standards will be applied to all development projects. This is a higher standard than currently exists in the Northwest District of the Florida Department of Environmental Protection (FDEP). The increased protection could assist in the recovery of species such as Gulf sturgeon and manatees, which may occur in receiving water bodies.
9. Corps jurisdictional determinations (JD) will be applied to all development projects. The Corps JD is generally more encompassing than the FDEP method.
10. No fill in wetlands will be allowed for septic tanks or drainfields.
11. *Habitat Management Guidelines for the Bald Eagles in the Southeast Region* (USFWS, 1987) will be applied to all development sites, mitigation banks, and CU's.
12. Road construction at WaterSound North, a proposed project under RGP-86, will include wildlife crossings as identified in the project plans dated January 30, 2004.
13. If a proposed project site occurs within known locations of telephus spurge, all impacts to the species will be avoided. If this is not practicable, re-initiation of consultation may be required. The Service will continue to coordinate with the Corps and with landowners to develop recovery actions for the species (see Appendix I).

Action area

For purposes of the Endangered Species Act, action area is defined as all areas affected directly or indirectly by a Federal action, including interdependent and interrelated actions and proposed conservation measures. Although each potentially affected species will define a separate action area, the most inclusive geographic area is referenced for simplicity.

The action area for this analysis is generally described as the proposed boundary of the RGP, including the mitigation banks. Receiving waters under consideration for aquatic or water-dependent species are West Bay, Lake Powell, the intracoastal waterway, and extreme southeast

Choctawhatchee Bay. Adjacent wetlands and uplands were considered where development or conservation actions could potentially affect non-aquatic species.

Based on the proposed protective, avoidance, and minimization measures and the analysis provided in the BA, the Service concurs with the following determinations of effects. More detail regarding these species and potential effects of the project is found in the BA.

-Piping Plover – No Effect

- Only one historical record occurs near the project. The site is not within listed critical habitat for the species. There are no direct effects to the site, and indirect effects would be difficult to measure.

-Sea Turtles – No Effect

- Beachfront habitat is located near the project site at Lake Powell inlet, but not within the RGP boundary. Almost all beachfront that is not presently developed at Lake Powell is within Camp Helen State Recreation Area. Based on the project description and location, the Service concurs with the determination that no effects to sea turtles will occur as a result of the proposed action.

-Wood Storks – No Effect

- No documented occurrences in vicinity.

-Alligator – No Effect

- Alligators were listed due to similarity of appearance with crocodiles; however, the project is not located within the range of the crocodile.

-Plants (federally listed) – Six federally listed plant species were considered in the BA.

These were selected from the Service's lists of plants that have the potential to occur in Bay and Walton Counties. Additional plant surveys were conducted, although they were limited considering the size of the project area and the timeframe for RGP development. No federally listed plant species were observed within the project area during the initial surveys that were conducted as part of this project; however, subsequent surveys verified and expanded known locations of one plant, telephus spurge, in the project area.

1. Cooley's meadow rue (*Thalictrum cooleyi*) – No Effect

- Only one known population of Cooley's meadow rue occurs in Florida, and it appears that suitable soils may not be present in the project area. This species does not tolerate disturbance, and most impacts of the permit would be in areas that are highly disturbed.

2. Crystal Lake nailwort (*Paronychia chartacea* ssp. *minima*) – No Effect

- There are no recorded observations of this species within the project area; there is no suitable habitat (sandhill upland lakes and karst ponds); and the known species range is well northeast of the project area.

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3. Florida skullcap (*Scutellaria floridana*) – No Effect

- There are no recorded observations of this species within the project area. The only known record in Bay County occurs approximately 17 miles from the project, and all other records in its range are in counties even farther to the east. This species does not tolerate disturbance, and most impacts of the permit would be in areas that are highly disturbed.
4. White birds-in-a-nest (*Macbridea alba*) – No Effect
- Within the project area, potentially suitable habitat for white birds-in-a-nest may be present in cleared or recently planted areas, in roadside ditches, or along the edges of pine plantations. However, this species has not been observed in the project area, and the nearest observations are in eastern Bay County in the vicinity of Sandy Creek and East Bay, approximately 17 miles from the project site.
5. Godfrey's butterwort (*Pinguicula ionantha*) – May Affect, Not Likely to Adversely Affect
- There are no recorded observations of this species within the project area, but there are records in the vicinity to the southeast of the project. Suitable habitat may be present in small pockets within pine plantations that could be affected by the developments within the project area. The species could also be found in herbaceous ecotones of the more high quality wetlands that will be protected. Beneficial effects of the project include the following: protection of high quality wetlands and high quality ecotone habitat that may be adjacent to them; establishment of buffers around preserved wetlands; and protection of uplands and wetlands within conservation units and two mitigation banks. Without RGP-86, most of the suitable habitat would continue to be negatively affected by intense silviculture.
6. Telephus spurge (*Euphorbia telephiodes*) – May Affect, Not Likely to Adversely Affect
- There is one known location recorded of this species within the project area, and suitable xeric upland habitat occurs in scattered pockets throughout the project area. However, most upland habitat that would normally be suitable has been converted to sand pine plantations that would continue to be harvested and replanted under the present land use activities. Additional work was conducted by the landowner following completion of the BA. The work was necessary to confirm the location of the species and provide maps to the landowner and the agencies. A conservation measure incorporated into the project stipulates that all impacts to telephus spurge will be avoided. Consultation will be re-initiated if impacts cannot be avoided. Approximately 4,485 acres of other uplands will be placed in conservation units and mitigation banks. These uplands could include as yet unrecorded locations of telephus spurge.
- Manatees – May Affect, Not Likely to Adversely Affect
- There are few documented records of occurrence in the action area. The species is considered transitory in this area.

- Project could indirectly affect seagrass through hydrologic alterations and increased sediment, nutrient, and chemical loading. However effects are expected to be of a scale that will not measurably alter the system's ecological balance due to the expanse of the receiving waterbody. Conservation measures address water quality issues to the extent currently practicable by adopting ERP stormwater criteria.
- Note that the manatee key also leads to a May Affect, Not Likely to Adversely Affect determination, even though the project is not located in Section 10 waters. This determination is based on the fact that the potential indirect effects related to water quality are insignificant in consideration of the large geographic area covered by RGP-86, including extensive shoreline areas.

-Gulf sturgeon – May Affect, Not Likely to Adversely Affect

- The project could indirectly affect Gulf sturgeon habitat due to increased stormwater associated with development. The Service received concurrence from National Marine Fisheries Service (NMFS) that we should be the lead agency in this case because potential impacts are related to water quality (Bolton, August 2003). NMFS would be the lead agency only if there were proposed direct impacts to sturgeon habitat. There are few documented records of species occurrences in West Bay, where the species is transitory. Critical habitat is located near the action area in Choctawhatchee Bay; however, only a small portion of the Choctawhatchee Bay watershed occurs in the action area. Indirect effects are expected to be of a scale that will not measurably alter the system's ecological balance due to the expanse of the receiving waterbody and the conservation measures provided that address water quality issues to the extent currently practicable. These measures are described in the BA. Furthermore, the influence of these hydrologic alterations and increased sediment, nutrient, and chemical loadings would be minor in comparison to large influence of nutrient and sediment inputs currently stemming from the Choctawhatchee River. However, if measurable impacts on any of the primary constituent elements essential for the conservation of the Gulf sturgeon are documented, re-initiation of consultation with the Service should occur. The primary constituent elements are those habitat components that support feeding, resting, sheltering, reproduction, migration, and physical features necessary for maintaining the natural processes that support these habitat components. Relevant to this project, any impacts that alter the abundance of prey items, disrupt aggregation areas, decrease water quality, or increase sediment quality would potentially affect the Gulf sturgeon. The added stormwater provisions of RGP-86 minimize adverse effects.

-Red-cockaded woodpeckers – May Affect, Not Likely to Adversely Affect

- The action area has been surveyed on numerous occasions. No active cavities were recorded, including an evaluation of two historical cavity trees within the action area. Almost all upland habitats have been converted to silviculture, and most remaining unplanted wetlands are cypress/bayhead communities with dense

shrub and mid-story layers. Wildlife surveys for projects will be conducted as they come into the planning stages. If active cavities are found, the landowner will notify the Corps, which will re-initiate consultation with the Service. Additional information on re-initiation is provided in the Re-initiation Notice of this BO.

-Bald eagles – May Affect, Not Likely to Adversely Affect

- One documented bald eagle nest is located in the action area. The nest is located within the proposed Breakfast Point mitigation bank. The management plan for the bank incorporates the *Habitat Management Guidelines for the Bald Eagles in the Southeast Region* (USFWS, 1987). Other areas have been surveyed, but will be surveyed again when each proposed large project goes into the planning stages. If new nests are found, the Habitat Management Guidelines for Bald Eagles will be incorporated into the project. If the guidelines cannot be implemented, initiation of consultation for the bald eagle may be required.

-Flatwoods salamander – Likely to Adversely Affect

- The Service concurs with the determination for this species, which is the focus of remaining analysis in this biological opinion.

STATUS OF THE SPECIES/CRITICAL HABITAT

This section summarizes the biology and ecology of the flatwoods salamander. The Service uses this information to assess whether a Federal action is likely to jeopardize the continued existence of this species. The Environmental Baseline section summarizes information on status and trends of the species specifically within the action area. These summaries provide the foundation for the Service's assessment of the effects of the proposed action, as presented in the Effects of Action section, and to make the Conservation Recommendations listed at the end of this opinion.

Flatwoods Salamander

The flatwoods salamander (*Ambystoma cingulatum*) is listed as a threatened species under the authority of the Endangered Species Act of 1973, as amended (Act). The flatwoods salamander was designated as threatened in the Federal Register, April 1, 1999 (64 FR 15691), and became effective on May 3, 1999. No critical habitat has been designated for this species. Recovery planning is underway, but no recovery plan has been adopted.

Species description

The flatwoods salamander is a slender, small-headed mole salamander that is seldom greater than 5 inches in length. Adult dorsal color ranges from black to chocolate-black with highly variable, fine, light gray lines forming a net-like or cross-banded pattern across the back. Undersurface is plain gray to black with a few creamy or pearl gray blotches or spots. Flatwoods salamander larvae are long and slender, broad-headed and bushy-gilled, with white bellies and striped sides (Ashton, 1992; Palis, 1995). Flatwoods salamanders are known to occur in isolated populations

across the lower southeastern Coastal Plain, with the majority of the remaining known populations located in Florida.

Life history

Adult and subadult flatwoods salamanders live in underground burrows. Adult flatwoods salamanders move above ground to their wetland breeding sites during rainy weather, in association with cold fronts, from October to December (Palis, 1997). Typical breeding sites are isolated pond cypress (*Taxodium ascendens*), blackgum (*Nyssa sylvatica* var. *biflora*), or slash pine (*Pinus elliottii*) dominated depressions which dry completely on a cyclic basis. They are generally shallow and relatively small, and have a marsh-like appearance with sedges often growing throughout, and wiregrass (*Aristida* sp.), panic grasses (*Panicum* spp.), and other herbaceous species concentrated in the shallow water edges. After breeding, adult flatwoods salamanders leave the pond.

Optimum adult habitat for the flatwoods salamander is an open, mesic (moderate moisture) woodland of longleaf/slash pine (*Pinus palustris*/*P. elliottii*) flatwoods maintained by frequent fires, with a dominant ground cover of wiregrass (*Aristida* spp.). The ground cover supports a rich herbivorous invertebrate community that serves as a food source for the species (64 FR 15692).

In a study by Ashton (1992), flatwoods salamanders were found greater than 1,859 yards from their breeding pond. However, based on more recent data (Semlitsch, 1998) and additional peer review, the final listing rule recommends a 1,476-foot “buffer” around breeding ponds to protect the majority of a flatwoods salamander population from the adverse effect of certain specified, silvicultural practices. This buffer extends 1,476 feet out from the wetland edge.

Since they may disperse long distances from their breeding ponds to upland sites, desiccation can be a limiting factor. Thus, it is important that areas connecting their wetland and terrestrial habitats are conserved in order to provide cover and appropriate moisture regimes during their migration. High quality habitat for the flatwoods salamander includes a number of isolated wetland breeding sites within a fire maintained landscape of longleaf pine/slash pine flatwoods having an abundant herbaceous ground cover (Sekerak, 1994). In Florida, Palis (1997) found that 70 percent of the active breeding sites were surrounded by second-growth longleaf or slash pine flatwoods with nearly undisturbed wiregrass ground cover.

Population dynamics

A flatwoods salamander population has been defined as those salamanders using breeding sites within 2 miles of each other, barring an impassable barrier such as a perennial stream (Palis, 1997). Since temporary ponds are not likely permanent fixtures of the landscape due to succession, there would be inevitable extinctions of local populations (Semlitsch, 1998). By maintaining a mosaic of ponds with varying hydrologies, and by providing terrestrial habitats for adult life stages and colonization corridors, some prevention of local population extinction can be achieved. A mosaic of ponds would ensure that appropriate breeding conditions would be

achieved under different climate regimes. Colonization corridors would allow movement of salamanders to new breeding sites or previously occupied ones (Semlitsch, 1998).

Fire is needed to maintain the natural pine flatwoods community. The disruption of the natural fire cycle has led to an increase of slash pine on areas previously dominated by longleaf pine, increases in hardwood understory and canopy, and subsequent decreases in herbaceous ground cover (64 FR 15701). Isolated ponds that are surrounded with pine plantations and are protected from fire may become unsuitable breeding sites for the flatwoods salamander. This is a result of canopy closure and the reduction in herbaceous vegetation necessary for egg deposition and larval development (Palis, 1993).

Status and distribution

Historical records for the flatwoods salamanders in its range are limited. Longleaf pine/slash pine flatwoods historically occurred in a broad band across the lower southeastern Coastal Plain. The flatwoods salamander likely occurred in appropriate habitat throughout this area (64 FR 15691). Range-wide surveys in Alabama, Florida, Georgia, and South Carolina have been ongoing since 1990 in an effort to locate new populations. Most surveys were searches for the presence of larvae in the grassy edges of ponds.

The combined data from the surveys completed since 1990 indicate that 59 populations of flatwoods salamanders are known from across the historical range. Most of these occur in Florida (47 populations or 80 percent). Eight populations have been found in Georgia, four in South Carolina, and none have been found in Alabama. Some of these populations are inferred from the capture of a single individual. Slightly more than half the known populations for the flatwoods salamander occur on public land (40 of 59, or 68 percent).

ENVIRONMENTAL BASELINE

Status of the species within the action area

Historical data on flatwoods salamanders in the action area is limited. Most of the area is privately owned and has been intensively managed for silviculture for many years. Little remains of the natural terrestrial landscape. Almost all uplands and most wetlands were converted to pine plantations with site preparation that included clearcutting, roller chopping, herbicide application, and bedding. In addition, pine flatwoods are not considered wetlands under State of Florida best management practices for silviculture; therefore, this habitat type receives no special consideration when converted and managed for industrial forestry.

There are no documented occurrences of flatwoods salamanders in Bay County and only one recent record in Walton County. The Walton County record is for one individual at one location in Point Washington State Forest, which is adjacent to the RGP-86 boundary but separated to a great extent by a four-lane highway. One large parcel of the State Forest bisects the RGP area at the western end, and other parcels are adjacent to the RGP boundary north of the highway in that vicinity. The known record for the flatwoods salamander at the State Forest is located south of

the four-lane highway. Further field investigations were recommended for the RGP area due to the proximity to the known location and the absence of surveys across this vast expanse of private lands in the project area. There is also one other known occurrence approximately seven miles north of the project area in Pine Log State Forest in Washington County.

The St. Joe Company (Company) owns the majority of lands in the action area. The Company has received assistance from the Service in recent years in an effort to develop a habitat suitability model for flatwoods salamanders. Such a model would provide useful information for salamander management and recovery, particularly in the Florida panhandle where the Company has much of its lands. Unusually dry conditions in recent years delayed progress on the model, but a fair amount of background data collection was conducted in the project area. The area also has been visited on several occasions by one of the foremost flatwoods salamander experts, John Palis. Mr. Palis was first contracted by the Company to visit the project area on March 8, 2000. This cursory visit identified potential habitat and that “flatwoods salamanders may occur at this site” (Palis, 2000). Subsequent field inspections were conducted by John Palis in the action area related to the habitat model and to Camp Creek Golf Course Phase II.

Mr. Palis was again contracted to evaluate potential flatwoods salamander habitat specifically in the RGP area. Details of his survey methods are described in the biological assessment. Approximately 300 potential sites were initially selected using aerial photography and GIS data. These sites were throughout the RGP area, not just on St. Joe Company lands (Figure 2, page 15). Upon further review of high resolution photography, historical photography, and soils maps, Palis selected 83 of the 300 sites “that merited a field visit to determine their potential as flatwoods salamander habitat” (WilsonMiller, 2003) (Figure 3, page 16). A team including Palis, the applicant, and consultants for the applicant inspected these sites, and any others that were noted in the field. Each site that was deemed to have at least a “small potential” for suitable habitat was re-visited by Palis. The final analysis concluded that only nine wetlands appeared to be suitable habitat (Figure 4, page 17).

There is no set protocol at this time for providing reasonable assurance that salamanders do not occur at a particular location. However, the consensus among herpetologists is that a reasonable effort would consist of drift fence surveys surrounding a potential breeding pond to be conducted in two consecutive “normal” weather years. There has not been an opportunity to adequately survey for the presence or absence of flatwoods salamanders in any of the potentially suitable habitats due to a recent drought. However, based on the remote sensing analysis, site inspections, and the proximity to at least two known locations, the Corps and the St. Joe Company have agreed to presume presence of flatwoods salamanders at the nine potential locations. This appears to be a reasonable approach given the size of the project area and the limited timeframe to conduct surveys. Positive results from any future surveys would require re-initiation of Section 7 consultation if there is a potential to affect suitable habitat not addressed in the incidental take section of this opinion.

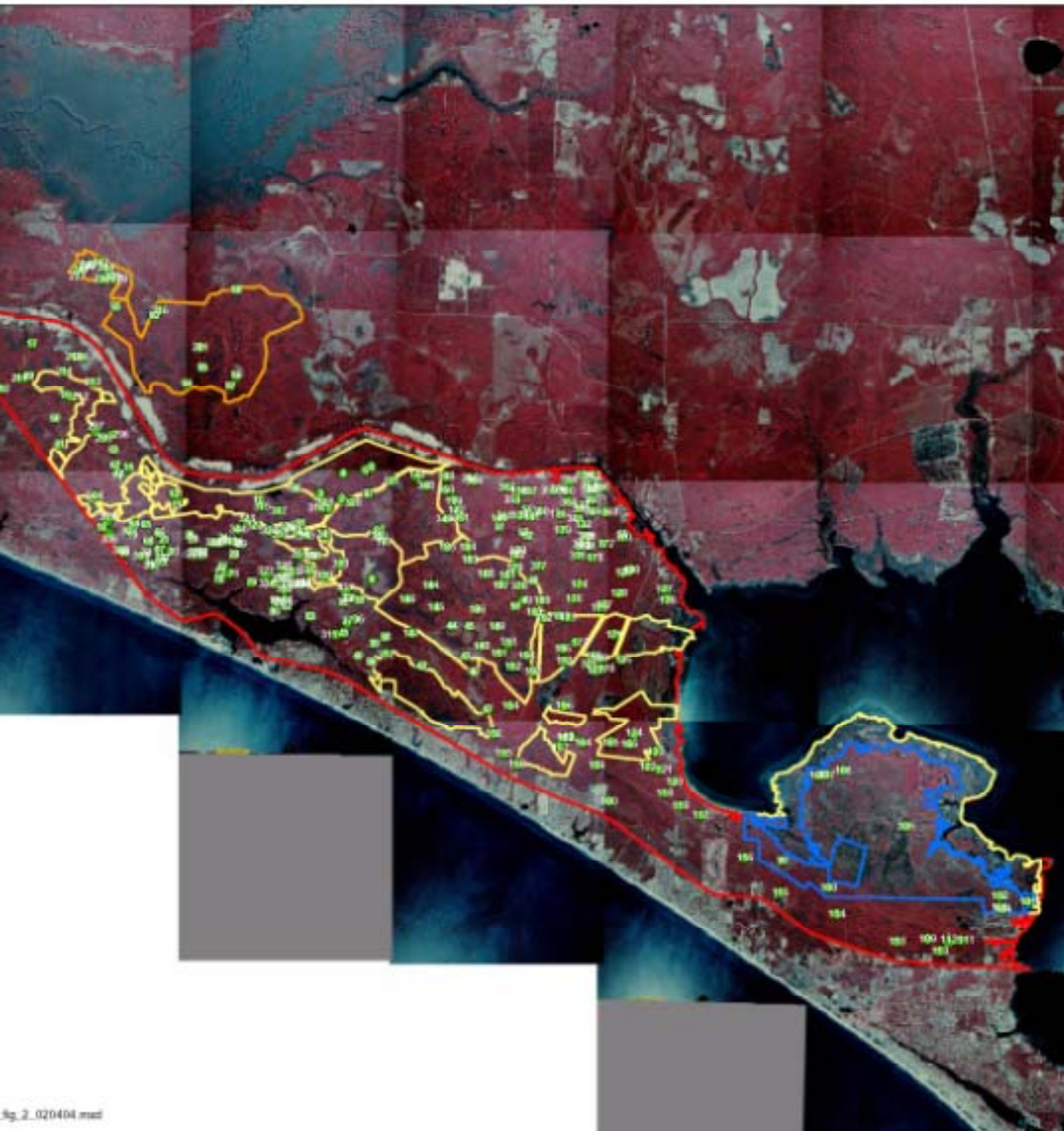


Figure 2

**300+ Sites Selected
for Analysis
Biological Opinion**

**West Bay to
East Walton RGP**

Legend

Conservation Units

RGP Area (Including Tidal Soils)

Devil's Swamp Mitigation Bank

Breakfast Point Mitigation Bank

Ponds Reviewed Prior to Field Surveys for
Potential Flatwoods Salamander Habitat

203 Pond Identification Number

Disclaimer:

This exhibit was prepared utilizing GIS data provided by various sources that may include but not limited to federal, state, district and local agencies. Data provided by other sources are not warranted by WilsonMiller for accuracy or for any particular use that may require accurate information. This map is for informational purposes only and should not be substituted for a wetland jurisdictional determination, true title search, property appraisal, survey, or for zoning verification.

Map Date:
02/04/04



0 0.5 1 2 3 4 Miles

WilsonMiller

Site Assessment & Planning, Design & Engineering

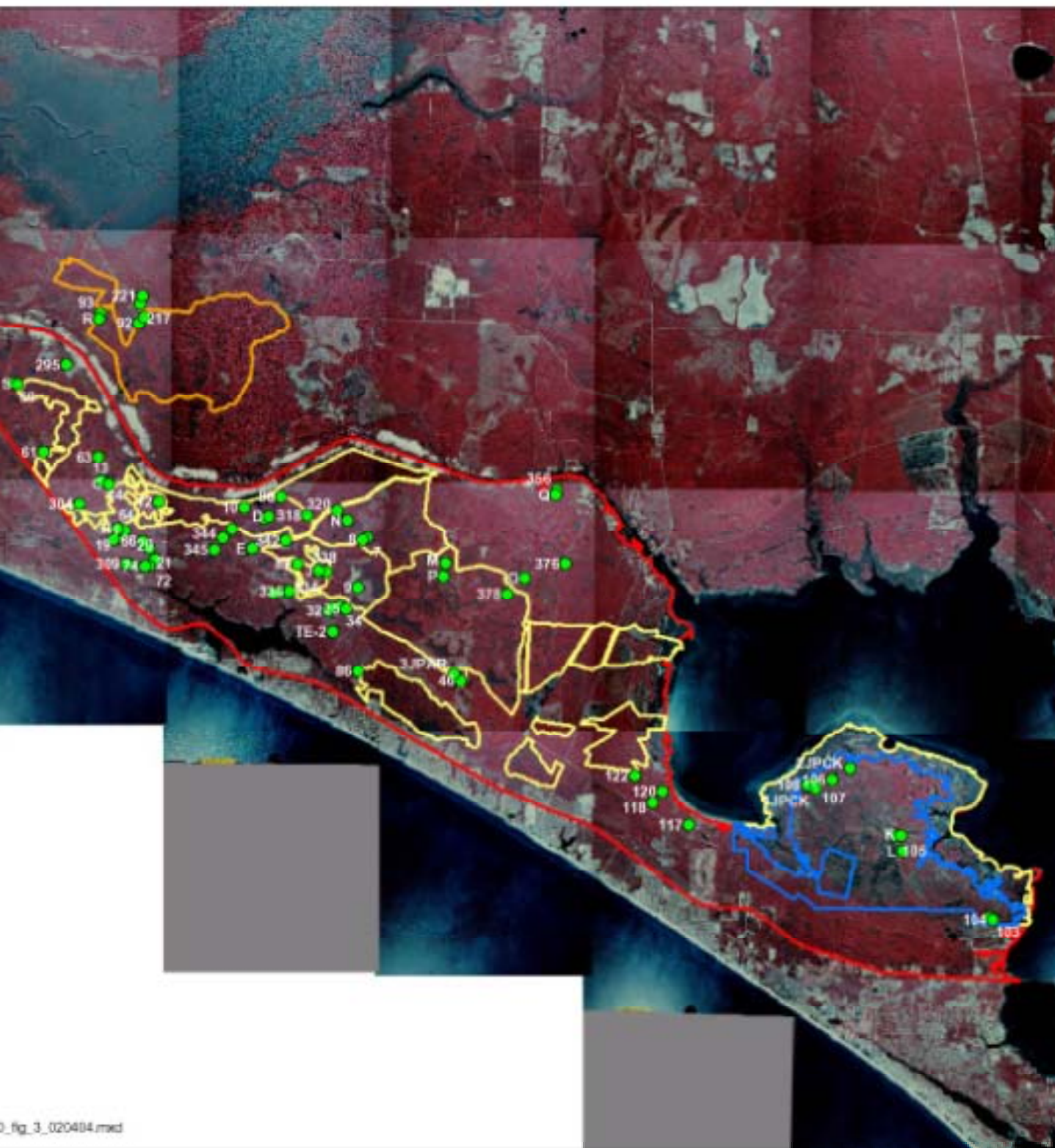


Figure 3

**83 Sites Selected
from 300+**

**West Bay to
East Walton RGP**

Legend

- Conservation Units
- RGP Area (Including Tidal Soils)
- Devil's Swamp Mitigation Bank
- Breakfast Point Mitigation Bank

- Ponds Surveyed for Potential
Flatwoods Salamander Habitat

203 Pond Identification

Disclaimer:

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Map Date:
02/04/04



0 0.5 1 2 3 4 Miles

WilsonMiller
New Solutions in Planning, Design & Engineering

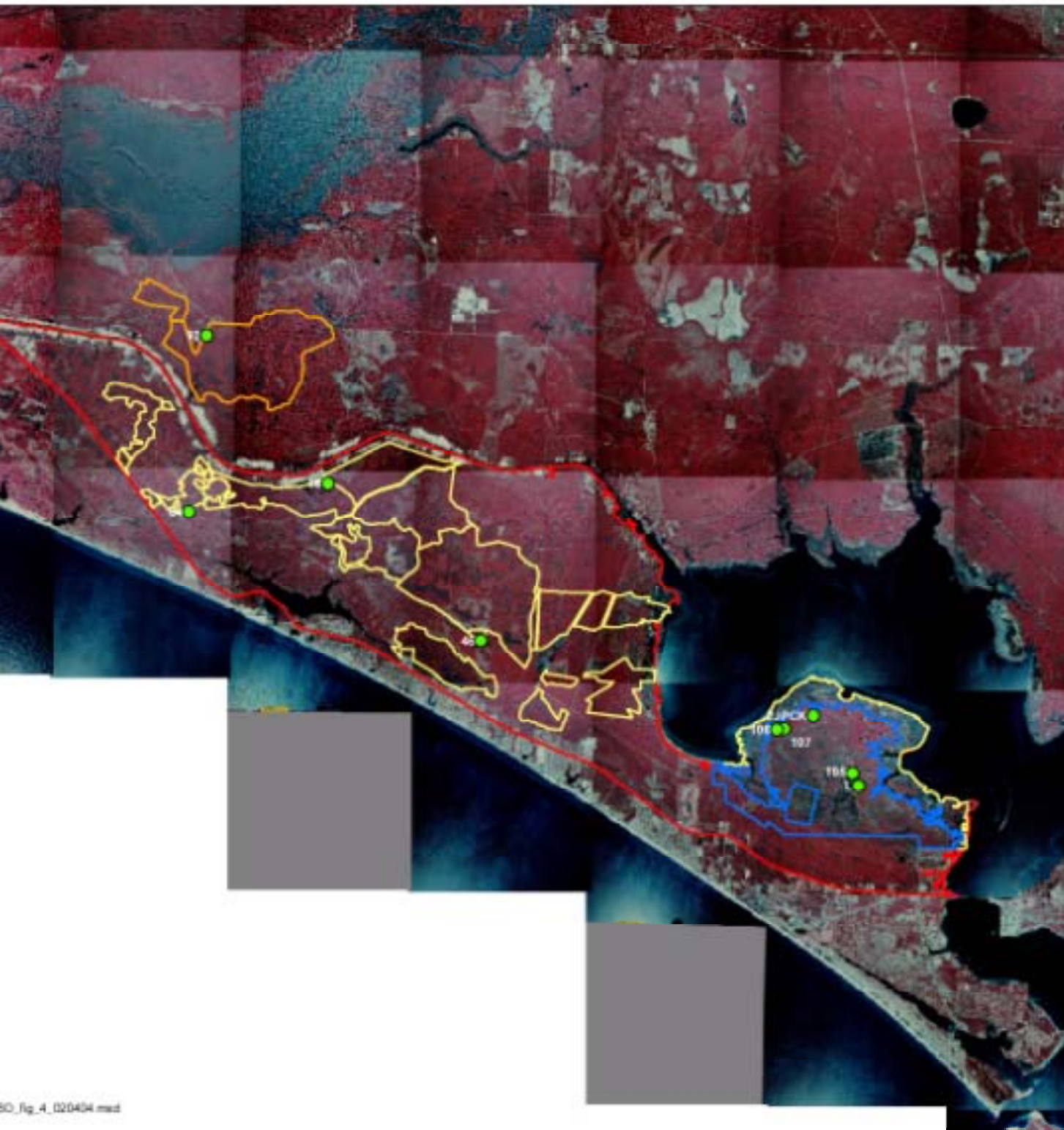







Figure 4
Nine Potential
Salamander Locations
West Bay to
East Walton RGP

Legend

-  Conservation Units
-  GP Area (Including Tidal Soils)
-  Devils Swamp
-  Breakfast Point

-  Ponds Considered Potential Habitat Based on Field Survey Results

46 Pond Identification

Disclaimer:

This exhibit was prepared utilizing GIS data provided by various sources that may include but not limited to federal, state, district and local agencies. Data provided by other sources are not warranted by WilsonMiller for accuracy or for any particular use that may require accurate information. This map is for informational purposes only and should not be substituted for a wetland jurisdictional determination, true title search, property appraisal, survey, or for zoning verification.

Map Date:
02/04/04



0 0.5 1 2 3 4 Miles

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Factors affecting species environment within the action area

This analysis describes factors affecting the environment of the species in the action area. The baseline includes State, local, Tribal, and private actions within the action area already affecting the species or that will occur contemporaneously with the proposed action and would affect the environment of the flatwoods salamander. Unrelated Federal actions affecting the salamander that have completed formal or informal consultation are also part of the environmental baseline, as are Federal and other actions within the action area that benefit the salamanders.

West Bay Sector Plan - Bay County officials recently conducted a special planning effort for a portion of the RGP and additional adjacent areas totaling approximately 75,000 acres. The “West Bay Sector Plan” identifies potential development and conservation strategies for the area, and is predicated on re-location of the Panama City/Bay County International Airport. Although the plan may encourage and accelerate development, it should reduce adverse effects to an extent that is not likely given existing land use regulations. There are no known flatwoods salamander records within the sector planning area. Potential habitat occurs in a proposed sector conservation area that coincides with the Breakfast Point mitigation bank. It is likely that other habitat could be found in the approximately 30,000 acres identified as the West Bay Preservation Area.

Camp Creek Golf Course, Medallist, and Highway 98 - These three projects are within the RGP boundary. Each project required Corps permits and formal consultations for flatwoods salamanders. Similar to the approach agreed upon for the RGP, each project area was presumed to have salamanders based on the presence of suitable habitat and the proximity to known locations. The amount of presumed take from these three projects totals 606 acres of buffer habitat. There was no direct take of breeding pond habitat.

Public Lands - Point Washington State Forest occurs within the RGP boundary. There is one known location of a flatwoods salamander breeding pond in the forest, but it is a considerable distance from any potential development that could occur in the RGP. The forest is actively managed in a manner that should improve salamander populations. Pine Log State Forest is in proximity to the RGP boundary, but not located within the project area. As with Point Washington, there is one documented occurrence of flatwoods salamanders, and the forest is managed to improve habitat for the species. The Northwest Florida Water Management District (WMD) also owns large parcels adjacent to the project area. There are no known occurrences of flatwoods salamanders on WMD land, but there is good potential that active management will improve habitat. The RGP conservation units blend with the State forest and WMD lands to provide an opportunity for habitat improvement and connectivity across a large area of Bay and Walton counties.

EFFECTS OF THE ACTION

RGP-86 is designed to manage the cumulative effects of numerous potential Section 404 dredge and fill permits. The RGP guides development to specific areas allowing no more than 20 percent of low quality silviculture wetlands to be impacted within each sub-watershed in the RGP area. More than 99 percent of high quality, unplanted wetlands will remain. Two mitigation banks of 7,700 acres will compensate for the loss of wetland functional values to both low and high quality wetlands. Conservation units of 13,200 acres will be removed from development potential as a condition of the permit, but will be encumbered by conservation easements concurrently as future development projects receive permit authorization. The conservation units and mitigation banks establish large, contiguous blocks of manageable lands, wildlife corridors, and provide for reduction of potential stormwater and hydrological impacts. Effects of the project on salamander habitat are based on two important premises: 1) best available methods were used to identify potential habitat, and 2) presence of salamanders is presumed for these areas although none have been documented.

Direct effects

The BA identifies specific direct effects of the project to include development projects within two potential habitats identified as Ponds 64 and 46. Pond 64 is the only potential breeding habitat that is not located within a conservation unit or one of the two mitigation banks. Pond 46 was added to a conservation unit following its discovery and evaluation; however, some of the surrounding buffer habitat of Pond 46 falls outside the conservation unit and is therefore subject to future development plans. All other identified suitable habitat, including buffers, is located either within a conservation unit or a mitigation bank. Direct effects could occur in other locations if suitable habitat is discovered at a later time; however, this situation would constitute new information that would trigger re-initiation of consultation.

The BA describes the method by which John Palis and the consultants quantified the amount of suitable habitat that could be affected at Ponds 64 and 46. This is based on a draft project design for a residential/golf course development adjacent to Pond 64 and presumed future development within suitable buffer habitat of Pond 46 that is outside the conservation unit. The BA indicates that approximately 57 acres of fair to fairly good buffer habitat will be affected at Pond 64. Approximately 53.6 acres of potential buffer habitat will be affected at Pond 46.

Management of the conservation units and the mitigation banks should ultimately benefit flatwoods salamander habitat. The conservation units will be managed according to *Principles for Forest and Wildlife Management for Conservation Units Within the Regional General Permit Area* that is part of RGP-86. The banks will be managed according to their mitigation banking instruments. The ultimate goal in both conservation units and banks is to restore the habitat to historical natural condition.

Indirect effects

Flatwoods salamanders are thought to be sensitive to soil and groundcover disturbing activities, especially when that disturbance creates an impediment to movement from upland habitat to the ephemeral wetlands they use for breeding and larval development. Soil disturbance can also result in potential sedimentation and erosion affecting nearby wetlands habitat. However, construction that could occur within proximity to suitable habitat is limited by the boundaries of the conservation units and mitigation banks and by the proposed buffers. In addition, a proposed road near Pond 64 has been re-designed to include underpasses for reptiles, amphibians, and small mammals. This would maintain a connection between the pond and an area to the north that will be placed in a conservation easement within the development and which connects to a large conservation unit.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed project are not considered in this opinion because they require separate consultation pursuant to section 7 of the Endangered Species Act.

RGP-86 was specifically designed through 3 years of interagency coordination to address cumulative effects that could be expected from increased development pressure in the area. The Service has evaluated numerous development projects in the area in recent years, and has conducted formal consultation for flatwoods salamanders for three of these projects. The general permit provides a more coordinated ecosystem approach for implementation of the current dredge and fill program in the area. The cooperation of the largest landowner in the area has been instrumental in the process. Additional evaluation of flatwoods salamander habitat will occur on a project-by-project basis using the procedures described in Appendix II.

CONCLUSION

After reviewing the current status of the flatwoods salamander, the environmental baseline for the GP-86 action area, the effects of the proposed activities, proposed protective, avoidance, and minimization measures, and the cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the flatwoods salamander. Within the GP project area, nine wetlands were identified as potential suitable habitat for the flatwoods salamander. No known breeding habitat for flatwoods salamander will be affected. As conditions of issuing the permit for the project, mitigation banks totaling 7,692 acres will be established to compensate for loss of wetland values and conservation units totaling 10,665 acres will be removed from development potential. Seven of the nine potential flatwoods salamander ponds are located completely within a conservation unit or mitigation bank. Of the two ponds not included, only one is completely outside a conservation unit or mitigation bank. The combined acreage of affected buffer habitat in both ponds totals 110.6 acres. This acreage, which has been established as the amount of take for the affected potentially occupied habitat, is very small when compared to the amount of suitable upland and wetland habitat (18,357 acres) that will be restored and managed in perpetuity within the conservation units and mitigation

banks. Loss of 110.6 acres of potential suitable habitat will not appreciably reduce the survival and recovery of the flatwoods salamander. No potential breeding pond habitat will be affected. Less than 2.4 percent of the buffer habitat surrounding these ponds will be taken. The GP project area will allow for protection and expansion of populations if any are eventually located at the site. The existing and future land uses without the GP (silviculture and haphazard development) would be more of a threat to recovery of the species than issuance of the permit. No critical habitat has been designated for the flatwoods salamander; therefore none would be affected.

There are approximately 160 ponds in Florida with a conservative estimate of 376,000 acres of pond and buffer habitat in the State [average 5-acre pond size plus 1,476-ft. buffer]. Therefore, the amount of take could be viewed as 0.0003 of the amount of known habitat in the State of Florida. As a reminder, it should be pointed out that all effects are for habitat that is **presumed** to support flatwoods salamanders, and that a majority of the buffer habitat around the two affected ponds will remain and be improved.

INCIDENTAL TAKE STATEMENT

Section 9 of the Endangered Species Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered or threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include major habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to noticeably disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be implemented by the Corps of Engineers for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to assume and assure implementation of the terms and conditions, or (2) fails to require applicants to adhere to the terms and conditions of the incidental take statement through enforceable terms, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Corps must report the progress of the project and its impacts on the species to the Service as specified in the incidental take statement [50 CFR §402.14(I)(3)].

Amount or extent of take

The Service has determined that incidental take of individual flatwoods salamanders is difficult to detect for the following reasons: (1) adult flatwoods salamanders are difficult to locate and

observe. Individuals killed during construction would likely be buried under dirt and debris, and/or, (2) losses may be masked by natural fluctuations in numbers of individuals. Although mortality of individuals is difficult to document, the level of take of this species was determined as follows: An estimated 110.6 acres of potential buffer habitat is presumed to be taken by development activities allowed under RGP-86.

Effect of the take

In the accompanying Biological Opinion, the Service determined that the level of anticipated take is not likely to result in jeopardy to the species. The amount of take is for **presumed occupied** habitat and is small when compared to potential habitat that will remain in conservation units and mitigation banks, both of which will eventually be restored to more suitable habitat and managed in perpetuity. The amount of take is also for buffer habitat only; no take is given for potential breeding ponds themselves. No critical habitat has been designated for the flatwoods salamander; therefore none will be affected.

Reasonable and prudent measures

The Service believes the following reasonable and prudent measures (RPMs) are necessary and appropriate to minimize take of flatwoods salamanders as a result development activities allowed under RGP-86.

1. All applicants for development projects will receive information about flatwoods salamander habitat.
2. Future development proposals will include a verification that the ponds on the site have been evaluated for their suitability as flatwoods salamander breeding ponds, as described in the terms and conditions.
3. Future owners of the conservation units will receive information about the flatwoods salamander conservation measures of RGP-86.

Terms and conditions

In order to be exempt from the prohibitions of section 9 of the Endangered Species Act, the Corps and applicants for RGP-86 must comply with the following terms and conditions, which implement the reasonable and prudent measures, described above. These terms and conditions are non-discretionary.

1. The conservation measures as described in the BA and in the proposed action section of this BO will be implemented.
2. The 5-year review and renewal process will provide an evaluation of salamander effects and conservation.

3. As part of the pre-application process for RGP-86, project sites will be assessed using the *Flatwoods Salamander Pre-Application Evaluation* (Appendix II). This requirement is addressed in Special Condition 19.a (8) of the permit.
4. As Special Condition 13.d of RGP-86, sale or transfer of conservation units requires that a copy of RGP-86 and this Biological Opinion be provided to the new owner.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Endangered Species Act (Act) directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The following conservation recommendations will be implemented if possible:

1. The Corps recognizes that a joint effort is underway to develop a predictive model to determine habitat suitability for flatwoods salamander. The research to develop the model has been ongoing for 2 years and requires another year for completion. To the extent it is available for use, the Corps and the St. Joe Company should apply the model to the project area.
2. The Corps and St. Joe Company should participate in conservation planning for telephus spurge in the RGP action area.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action outlined in this biological opinion. As provided in 50 CFR 402.16, Re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.

The above findings and recommendations constitute the report of the Department of the Interior. This concludes formal consultation. If you have any questions about this opinion or consultation, please contact staff biologist Hildreth Cooper of our Panama City Field Office at (850) 769-0552, extension 221.

Sincerely yours,

A handwritten signature in black ink, reading "Gail A. Carmody". The signature is written in a cursive style with a large, stylized "G" and "C".

Gail A. Carmody
Project Leader

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WilsonMiller

TO: Hildreth Cooper, USFWS
Gail Carmody, USFWS
Don Hambrick, USACE

FROM: Ann Redmond and Trina Mitchell

CC: Dave Tillis, Thomas Estes, St. Joe Company

SUBJECT: *Euphorbia telephioides* (Telephus Spurge) Populations in the Action and Project Area

DATE: April 30, 2004

On March 18, Hildreth Cooper informed WilsonMiller that the Service is concerned about the presence of telephus spurge populations in the Action and Project Areas. Patty Kelly, U.S. Fish and Wildlife Service (USFWS), had raised some questions about the impacts of the RGP on the species. Following the Biological Assessment of January 2004, a more detailed discussion of the telephus spurge has occurred. The content is related below.

The Telephus spurge was first listed in 1992 (USFWS 1994). Based on vouchered specimens, this plant is an endemic species that occurs in Bay, Gulf, and Franklin Counties, Florida (Institute for Systematic Botany 2002). The plant occurs from Panama City Beach east to the Ochlockonee River (USFWS 1994). It has been recorded in 41 locations, nearly half of which are on public land (Map 1).

All known occurrences of Telephus spurge are on sites within 4 miles of the Gulf of Mexico (USFWS 1994). Numerous populations are protected on St. Joseph Bay State Buffer Preserve and adjacent tracts of land (SJBBP); many occurrences are on private timberlands and utility right-of-ways (Chafin 2000, FNAI 2003, Hilsenbeck 2004, Willson 2004). Ed and Lisa Keppner have searched for the telephus spurge in Bay County and have found none (Keppner 2004). Hilsenbeck (2004) believes that the spurge's listing as a G1/S1 plant should be downgraded based on the abundance of the species in the SJBBP area.

Populations in Action Area

Two populations of Telephus spurge (*Euphorbia telephioides*) have been documented outside the Action Area, but near the Project Area, and one has been documented within the Project Area (FNAI 2003, 2004; Chafin 2004; Kindell 2004; WilsonMiller 2004)(Map 2). FNAI (2003) element occurrence (EO) data indicate that during the 2001 survey, no plants were observed in population EUPHTELE*0009 outside the Project Area (Table 1). The other two populations were re-confirmed in 2001 (Table 1), including the one within the Project Area.

WilsonMiller, Inc., resurveyed for the population within the Project Area (EUPHTELE*0007) on April 21, 2004, and found numerous individuals along US 98 within an area approximately 0.5 mile long (Map 3). Individuals were observed within the "beauty strip," a narrow strip (about 20 feet wide) of longleaf pine-false rosemary-saw

palmetto habitat located on the north side of US 98, between the highway and the slash pine plantation.

Table 1. Recorded Locations of Telephus Spurge in Bay County, Florida

Location	Last Observation	EO Data	EO Data	FNAI Map Label
Project Area	2004-04-21	2004-04-21. In a ~0.5-mile-long, 20-ft-wide strip along the north side of U.S.98. 2001-08-01. Now only on north side of road (PNDKIN02FLUS). 1988-08-08: 1.9 MI W OF JCT US98 AND US98 BYP; BOTH SIDES OF ROAD.	2004-04-21. More than 600 plants observed by WilsonMiller ecologists in the "beauty strip" of longleaf pine, wiregrass, false rosemary, saw palmetto, and Sporobolus floridana. 2003-09-26: no plants seen in survey of north side of road - habitat intact; narrow strip of flatwoods between US98 to south and titi/baygall to north; mostly shrubby (Ilex glabra, I. coriacea) with a few patches of wiregrass (PNDJOH01FLUS); 2001-08-01: 100+ plants seen. Etiolating in dense duff, about 10% of them in fruit or flower. Most plants are small, with only a few leaves. (PNDKIN02FLUS). 1988-08-08:200+, FLOWERING, FRUITING IN LEAF; NICE POPULATION.	EUPHTELE*0007
Outside Project Area, South side of US Highway 98	2001-08-01	2001-08-01: Directions given in this field in 1988 do not match where EO is mapped in GIS database. 1988-08-08: 0.7 MI E OF 30D ON ALT 30, S SIDE OF ROAD.	2001-08-01: Approximately 30 plants seen only within road right-of way, at edge of the flatwoods. All plants were small, and about 10 of them had fruits and flowers, (PNDKIN02FLUS) 1988-08-08: 200, FLOWERING AND FRUITING.	EUPHTELE*0008
Outside Project Area, south of US Highway 98 on CR30H	1988-08-23	1988-08-23: 0.2 MI S OF US 98 BYP ON CR 30H, E SIDE.	2001-08-01: no plants seen, possibly due to very dense vegetation. (PNDKIN02FLUS). 1988-08-23: 200+ COMMON IN OPEN AREAS, IN LEAF, FRUIT, FLOWER	EUPHTELE*0009

Source: WilsonMiller 2004; FNAI 2003, 2004.

Additional populations of Telephus spurge may be located within the Project Area west of the area indicated on Map 2, in cleared or recently planted areas, along roads, or along the edges of pine plantations.

Species Habitat Requirements

This species occurs in dry habitats along the Gulf coast on both sides of the Apalachicola River (USFWS 1994). This species occurs in longleaf pine savannas, scrubby and mesic flatwoods, and coastal scrub on low sand ridges near the Gulf of Mexico (Chafin 2000). The habitats for the population reconfirmed by WilsonMiller and for those recorded in the FNAI 2003 data are under power lines, in natural pinelands, and in remnant longleaf pine-saw palmetto-rosemary/wiregrass flatwoods. Hilsenbeck (2004) has observed the *Telephus* spurge in a wider variety of habitats in the SJBBP area than have been previously noted, from seasonally wet prairies to sandhills. In the wet prairies it co-occurred with *Rhynchospora oligantha* and a variety of sedges.

Habitat Conditions within the Project Area

Suitable habitat for *Telephus* spurge within the Project Area is almost entirely in planted pine and thus is typically in poor to very poor condition. However, the habitat in which the EUPHTELE*0007 population occurs is remnant longleaf pine-saw palmetto-rosemary/wiregrass flatwoods in a long, narrow strip along the north side of U.S. 98 (Map 2). This area is poor to good quality, lower quality resulting primarily from fire suppression.

Soils for the easternmost two populations are mapped as Leon Sand surrounded by Pottsburg Sand. Soils in the western population are mapped as Pamlico-Dorovan and Pottsburg Sand, although it occurs next to Leon Sand and it is unlikely that the spurge would occur in the wet Pamlico-Dorovan soils. These same types of soils complexes occur in the Breakfast Point Peninsula Conservation Unit and the Breakfast Point Mitigation Bank (Map 4; NRCS 1984).

Silviculture-associated activities that have been detrimental to this species include bedding, dense shading, and fire suppression (USFWS 1994). Coastal real estate and road development in the vicinity of Panama City Beach are known to have destroyed *Telephus* spurge habitat (USFWS 1994). Suitable habitat may already be protected where it occurs under power lines; however, herbicide use in these areas is a concern. Cooper (2004b) indicated that USFWS staff thought the EUPHTELE*0009 population may have been destroyed by the recent Pier Park development, but this site is 2.9 miles east of the Pier Park site and has not yet been cleared or developed.

Effects of the Proposed Action

A "may affect, not likely to adversely affect" determination was made for *Telephus* spurge in the Biological Assessment.

Where suitable habitat occurs under planted pine, it probably has been substantially degraded; where habitat occurs in the "beauty strip" and in power line and road right-of-ways, it likely has been somewhat protected and maintained. Power line right-of-ways and, to a lesser extent, road right-of-ways will continue to be somewhat protected and maintained as suitable habitat under the Proposed Action. One of the two populations verified in 2001 occurred in road right-of way; the other two populations (one verified and one not verified in 2001) occurred in longleaf-palmetto flatwoods.

Direct and indirect beneficial effects associated with the Proposed Action on potentially suitable habitat within the Project Area include the immediate preservation and eventual restoration of uplands within the conservation units and immediate protection and beginning restoration within the Devil's Swamp and Breakfast Point Mitigation Banks.

Potentially suitable habitat may be negatively affected by eventual construction of roads, residential communities, and other developments. Negative effects would likely include loss of potential habitat within the Project Area, outside the conservation units.

General Conservation Measures of RGP 86

The Applicant will implement methods recommended by USFWS (1994) in suitable habitat in the conservation units and in the mitigation banks. Suitable habitats include sandhills, scrubby and mesic flatwoods, and powerline right-of-ways through these habitats.

- Reduction of canopy without compacting, mixing, and/or rutting soils or destroying ground cover;
- Burning appropriately, primarily during the growing season (generally April through September) and depending on habitat. For instance, natural fire regime in sandhills is more frequent than in scrub (2 to 5 years in sandhills; catastrophic fire every 20 to 80 years in scrub [FNAI and FDNR 1990]);
- Substituting mowing for use of herbicides;
- Preventing vehicles from driving through easily damaged scrub habitats.

Specific Conservation Measures for Telephus Spurge

Further discussion with Hildreth Cooper of the USFWS about the Telephus spurge population resulted in the drafting of this memorandum, which is intended to provide draft language for a conservation measure to be added to the biological opinion. Proposed language for this conservation measure follows:

If the Applicant proposes a project that would impact the telephus spurge population indicated on Map 3 (WilsonMiller Observations of Telephus Spurge), impacts to this population should be avoided. If the proposed project cannot avoid impacts to this telephus spurge population, then re-initiation of consultation may be required. Consultation will take into consideration potential transplanting of individuals that would be impacted by a proposed project. Those individuals may be transplanted to appropriate areas of the Breakfast Point Mitigation Bank.

To support this process, the specific location of this population (WilsonMiller Observations) is provided on Map 3 and on Figure 5 of the Biological Opinion (attached), and will also be recorded in the St. Joe Company's internal real estate database no later than May 1, 2004.

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Appendix II.

Exhibit 20: RGP-86 Flatwoods Salamander Pre-Application Evaluation

Endangered Species Act formal consultation was conducted between the U.S. Fish and Wildlife Service and the Corps of Engineers as part of the development of RGP-86. Consultation was based on presumed presence of salamanders due to the proximity of two known locations and the observance of suitable habitat in the action area. Best available methods were used to determine potential impacts to flatwoods salamanders that could be expected from implementation of the permit. However, it is reasonable to expect that with a project area covering more than 47,000 acres (about 1/3 of which is potentially developable) undetected habitat could be present. In order to avoid and minimize potential take of salamanders in these situations, the following habitat evaluation was developed. This evaluation must be completed by all applicants and performed by a qualified ecologist/biologist.

Step 1: Preliminary Project Site Review

1. Applicants and consultants shall obtain and review an informational brochure developed by the Florida Fish and Wildlife Conservation Commission. The brochure is available from Florida Fish and Wildlife Conservation Commission, Bureau of Wildlife Diversity Conservation, 620 South Meridian Street, Tallahassee, Florida 32399-1600.
2. Applicants and/or their consultants shall compare aerial photographs of their project site to Figures 2, 3 and 4 of the Biological Opinion. Note all data points located within the project site and within 450 meters (1,476 feet) of the project site or limits of construction.
3. If any data points of Figure 4 are located within the project site or within 450 meters of the project site or limits of construction, **re-initiation of consultation is required. Continue with Step 2.**
4. Other data points of Figures 2 and 3 that are within the project site action area (including 450 meters) do not need further evaluation. Previous work conducted as part of the biological opinion addressed these sites. **Continue with Step 2.**

Step 2: Procedures for Reviewing Other Data to Determine Whether Additional Field Surveys Should be Conducted (based on Palis 2003):

There is a potential that suitable habitat may have been overlooked during the analysis for the Biological Opinion. Therefore, specific project sites must be reviewed using the procedures outlined below to determine whether they need to be field surveyed.

1. Review project site using high-resolution recent infrared aerials (scale of 1 inch = 400 feet), NRCS soils data for Bay and Walton counties, and historical aerials of your project area that are of as high a resolution as is obtainable. Note any ponds¹ not depicted on Figures 2 or 3 with similarity of appearance to those of Figure 4 in the Biological Opinion.
2. Features to look for on the infrared aerials are as follows:
 - Absence of a dense titi cover completely surrounding ponds. Absence is a positive indicator. Dense titi appears relatively dark red and smooth
 - A graminaceous, treeless ecotone along part of the pond edges. Presence is a positive indicator. Wet, herbaceous edges appear as smooth grayish blue, greenish grayish blue, or as a light band along the edge.
 - Absence of deep water. Absence of deep water is a positive indicator. Deep water appears dark blue or almost black.

¹ "Ponds" are not traditional open waterbodies, but are ephemeral wetlands that are ponded for a portion of the year.

3. On historical aerials, look for open savannahs or pine flatwoods around ponds. These are positive indicators and appear as smooth, light-colored areas with scattered to no trees.

4. On soil maps, where ponds occur, look for hydric or mesic soils around pond; hydric or mesic soils are positive indicators of flatwoods salamander use.

3. The presence of two or more positive indicators means that the pond(s) should be field surveyed.

- If yes, then you must conduct field surveys to determine whether the pond(s) is a potential flatwoods salamander pond. **Continue with Step 3.**
- If no here and no to Step 1. 3., then **you are finished with the flatwoods salamander evaluation - Go to Step 5.**
- If no here and yes to Step 1. 3., then **re-initiation of consultation is required.**

Step 3: Field Assessment of Potential Flatwoods Salamander (*Ambystoma cingulatum*) Ponds

The Description Data Sheet (next page) may be completed at the same time as other fieldwork, such as wetland delineation. The field data sheet that must be completed at the time of the field survey follows. Photographs must also be taken of the ecotone and pond, particularly noting the location of the most graminaceous portion of ecotone and wetland groundcover.

Potential Flatwoods Salamander (*Ambystoma cingulatum*) Pond Description Data Sheet

Instructions: Circle the number of the most appropriate descriptor in each category. If no description option applies, circle "other" and describe. In some categories, such as ECOTONE VEGETATION DESCRIPTION, SPECIES COMPOSITION, and SURROUNDING UPLANDS, circle the number for all appropriate descriptors.

Pond# _____ Date _____ Observer(s) _____

ECOTONE VEGETATION DESCRIPTION

(If more than one descriptor applies, circle and estimate percentage of pond perimeter.

Also circle appropriate grass and shrub species)

- | | |
|--|---------|
| 1) undisturbed graminaceous (<i>Aristida stricta</i> , <i>Calamovilfa curtissii</i>) ¹ , few to no shrubs (<i>Clethra</i> , <i>Cliftonia</i> , <i>Cyrilla</i> , <i>Hypericum</i> , <i>Ilex myrtifolia</i> , <i>Lyonia</i>) | _____ % |
| 2) disturbed graminaceous (<i>Aristida stricta</i> , <i>Calamovilfa curtissii</i> ; bedded/rutted), few to no shrubs (<i>Clethra</i> , <i>Cliftonia</i> , <i>Cyrilla</i> , <i>Hypericum</i> , <i>Ilex myrtifolia</i> , <i>Lyonia</i>) | _____ % |
| 3) undisturbed graminaceous (<i>Aristida stricta</i> , <i>Calamovilfa curtissii</i>) under thick <i>Clethra</i> , <i>Cliftonia</i> , <i>Cyrilla</i> , <i>Hypericum</i> , <i>Ilex myrtifolia</i> , <i>Lyonia</i>) | _____ % |
| 4) weedy graminaceous (<i>Andropogon</i> , <i>Panicum verrucosum</i> , and/or weedy <i>Rhynchospora</i>), few to no shrubs (<i>Clethra</i> , <i>Cliftonia</i> , <i>Cyrilla</i> , <i>Hypericum</i> , <i>Ilex myrtifolia</i> , <i>Lyonia</i>) | _____ % |
| 5) disturbed graminaceous (<i>Aristida stricta</i> , <i>Calamovilfa curtissii</i> ; bedded/rutted), under thick <i>Clethra</i> , <i>Cliftonia</i> , <i>Cyrilla</i> , <i>Hypericum</i> , <i>Ilex myrtifolia</i> , <i>Lyonia</i> | _____ % |
| 8) weedy graminaceous (<i>Andropogon</i> , <i>Panicum verrucosum</i> , weedy <i>Rhynchospora</i>) under thick <i>Clethra</i> , <i>Cliftonia</i> , <i>Cyrilla</i> , <i>Hypericum</i> , <i>Ilex myrtifolia</i> , <i>Lyonia</i> | _____ % |
| 9) thick shrubs (<i>Clethra</i> , <i>Cliftonia</i> , <i>Cyrilla</i> , <i>Hypericum</i> , <i>Ilex myrtifolia</i> , <i>Lyonia</i>) over little to no graminaceous (<i>Aristida stricta</i> , <i>Calamovilfa curtissii</i> , <i>Andropogon</i> , <i>Panicum verrucosum</i> , weedy <i>Rhynchospora</i>) | _____ % |
| 10) no ecotone | _____ % |
| 11) other: _____ | _____ % |

GRAMINACEOUS ECOTONE EXTENT DESCRIPTION

- | | |
|-----------------------------|------------------------------|
| 1) > 75 % of pond perimeter | 3) 26-50 % of pond perimeter |
| 2) 51-75% of pond perimeter | 4) <25% of pond perimeter |

GRAMINACEOUS ECOTONE WIDTH DESCRIPTION

- | | |
|---------------|---------------|
| 1) > 0 m wide | 3) 3-5 m wide |
|---------------|---------------|

¹ "Undisturbed graminaceous" and "disturbed graminaceous" mean that the appropriate ground cover species are present (*Aristida stricta*, *Calamovilfa curtissii*, wiry *Rhynchospora* spp., and *Sporobolus*). However, "disturbed graminaceous" indicates that the soil has been disturbed by human activities such as chopping, bedding, ATV or skidder tracks. "Weedy graminaceous" means that not only are the appropriate ground cover species absent, but that the soil has been disturbed.

2) 6-10 m wide

4) 1-2m wide

POND GRAMINACEOUS GROUND COVER SPECIES COMPOSITION

(place asterisk adjacent to visually dominant species)

- | | |
|--|---|
| 1) <i>Aristida affinis</i> | 6) <i>Rhynchospora inundata/corniculata</i> |
| 2) <i>Carex</i> | 7) <i>Rhynchospora</i> _____ |
| 3) <i>Dichanthelium (Panicum) erectifolium</i> | 8) <i>Sphagnum</i> |
| 4) <i>Eriocaulon compressum</i> | 9) <i>Xyris</i> |
| 5) <i>Panicum rigidulum</i> | 10) other: _____ |

POND GRAMINACEOUS VEGETATION COVERAGE

- | | |
|---|--------------------------|
| 1) extensive throughout basin, marsh-like | 4) limited to basin edge |
| 2) over most of basin (> 75 %) | 5) sparse |
| 3) scattered and local in basin (approx 25-74%) | 6) none |

POND CANOPY SPECIES COMPOSITION (place asterisk adjacent to visually dominant species)

- | | |
|------------------------------|---------------------------|
| 1) <i>Taxodium ascendens</i> | 4) <i>Ilex myrtifolia</i> |
| 2) <i>Nyssa biflora</i> | 5) other: _____ |
| 3) <i>Pinus elliottii</i> | |

POND CANOPY COVERAGE

- | | | | |
|---------|-----------|-----------|---------|
| 1) <25% | 2) 26-50% | 3) 51-75% | 4) >75% |
|---------|-----------|-----------|---------|

POND SUBSTRATE

- 1) relatively firm mud/sand with little to no leaf/needle litter
- 2) relatively firm mud/sand with abundant leaf/needle litter
- 3) soft and peaty (thick leaf/needle litter)

APPROXIMATE WATER DEPTH (_____ m)

If site dry, estimate using high water stains on trees: ____ m

WATER COLOR

- | | | | |
|-------------------------|-----------------------------|------------------------|-------------|
| 1) clear to light stain | 2) moderate stain (ice tea) | 3) dark stain (coffee) | 4) no water |
|-------------------------|-----------------------------|------------------------|-------------|

SURROUNDING UPLANDS

(circle every applicable number and indicate relative percentage of area around pond)

- | | |
|---|---------|
| 1) undisturbed graminaceous (<i>Aristida stricta</i> , <i>Sporobolus</i>) dominated, few to no shrubs | _____ % |
| 2) disturbed graminaceous (<i>Aristida stricta</i> , <i>Sporobolus</i>) dominated, few to no shrubs | _____ % |
| 3) approximately 50/50 undisturbed graminaceous (<i>Aristida stricta</i> , <i>Sporobolus</i>)/shrubs | _____ % |
| 4) approximately 50/50 disturbed graminaceous (<i>Aristida stricta</i> , <i>Sporobolus</i>)/shrubs | _____ % |
| 5) disturbed with sparse vegetation (i.e., principally pine straw) | _____ % |

- | | |
|---|---------|
| 6) shrub dominated (shrubs knee high or less), sparse graminaceous (<i>Aristida stricta</i> , <i>Sporobolus</i>) | _____ % |
| 7) shrub dominated (shrubs between knee and head high), sparse graminaceous (<i>Aristida stricta</i> , <i>Sporobolus</i>) | _____ % |
| 8) shrub dominated (shrubs head high or more), sparse graminaceous (<i>Aristida stricta</i> , <i>Sporobolus</i>) | _____ % |
| 9) weedy graminaceous (e.g., <i>Andropogon</i>), few to no shrubs | _____ % |
| 10) shrub dominated (shrubs knee high or less), sparse weedy graminaceous (<i>Andropogon</i> , etc.) | _____ % |
| 11) shrub dominated (shrubs knee to head high), sparse weedy graminaceous (<i>Andropogon</i> , etc.) | _____ % |
| 12) shrub dominated (shrubs head high or more), sparse weedy graminaceous (<i>Andropogon</i> , etc.) | _____ % |
| 13) other _____ | _____ % |

UPLANDS SPECIES PRESENT
(circle number and place asterisk by visually dominant species)

- | | |
|-------------------------------|---|
| 1) <i>Andropogon</i> | 8) <i>Lyonia lucida</i> |
| 2) <i>Aristida stricta</i> | 9) <i>Myrica cerifera</i> |
| 3) <i>Conradina canescens</i> | 10) <i>Pteridium aquilinum</i> |
| 4) <i>Cyrilla racemiflora</i> | 11) <i>Quercus minima/pumila</i> |
| 5) <i>Ilex glabra</i> | 12) <i>Serenoa repens</i> |
| 6) <i>Kalmia hirsuta</i> | 13) <i>Vaccinium darrowi/myrsinites</i> |
| 7) <i>Licania michauxii</i> | 14) _____ |

General Notes: _____

SKETCH WETLAND/UPLAND (North ↑)
 (delineate locations of vegetational differences in ecotone and in wetland and uplands)
 (**photograph** the ecotone and pond noting the location of the most graminaceous portion of ecotone and wetland ground cover, note photo points)

Step 4: Expert Review of Field Results

When Steps 2 and 3 have been completed, the completed field data sheets and photographs should be sent to a recognized flatwoods salamander expert. In addition, the current and historical aerials, soil data, and a map of the project site should also be forwarded to the expert. The expert will review all the information to determine whether the pond might be a potential flatwoods salamander pond.

The field data sheet used in Step 3 has been organized so that the descriptors under each category of interest are ordered from best to worst conditions for flatwoods salamanders. For example, under the category Ecotone Vegetation Description, the first descriptor [1) undisturbed graminaceous... few to no shrubs...] describes the best conditions for flatwoods salamanders and the last two descriptors [9) thick shrubs... and 10) no ecotone] describe the worst conditions.

The expert will evaluate the descriptors selected for each category of interest to determine whether the pond might be a potential flatwoods salamander breeding pond. If mostly low number descriptors were selected on the field data sheet, then the pond is more likely to be considered a potential breeding pond; conversely, if primarily high number descriptors were selected on the field data sheet, then the pond is less likely to be considered a potential breeding pond. However, no formula presently exists that encompasses all the possibilities that might eliminate or elect a pond for further consideration as a potential breeding pond.

If the expert cannot determine whether or not the pond should be considered a potential flatwoods salamander breeding pond, s/he may request additional information from the ecologist/biologist who visited the pond and/or the project applicant. If the request for additional information is not fulfilled within a reasonable time period or the response is not sufficiently helpful, the expert may also elect to visit the pond himself at the expense of the project applicant.

The expert will provide a written determination as to whether the surveyed pond(s) is likely to be a potential flatwoods salamander breeding pond.

Review Timeframes:

- Provide field data sheets to expert;
- Expert reviews field data sheets within 10 working days of receipt, and
 - Requests additional information, or
 - Provides² written determination;
- Project applicant or their consultant provides additional information to expert;
- Expert provides written determination to project applicant within 5 working days of receipt of sufficient additional information;
- Project applicant provides the expert's written determination and background documentation (prepared map of ponds, aerials, soil data, field data sheets, and photographs) to the agencies as part of the pre-application Item #8.

² "Provides" implies postmarked, emailed or faxed.

Step 5: Flatwoods Salamander Findings

	Yes	No
1. The project site contains or is within 450 meters (1,476 feet) of one or more of the data points indicated in Figure 4 of the Biological Opinion. If yes, re-initiation of consultation is required.	_____	_____
2. The project site contains or is within 450 meters of potential habitat not evaluated in the Biological Opinion.	_____	_____
3. Field evaluations and expert review were necessary for additional habitat	_____	_____
4. Expert review indicates that suitable habitat is located within the project action area. Name of flatwoods salamander expert _____. If yes, re-initiation of consultation is required.	_____	_____
5. Appropriate documentation is included to support these findings.	_____	_____

Signature _____
Ecologist/Biologist who performed
the evaluation

Date _____